

MATHEMATICAL ANALYSIS

	Head length	Head width	Femur	Tibia	Foot	Hand
N	49	49	49	49	49	49
M	33.7	31.9	42.0	48.0	39.0	26.2
σ	1.2	1.2	1.3	2.0	2.0	1.4
V	3.56	3.76	3.10	4.17	5.13	5.36
σ_m	0.01	0.54	0.44	0.50	0.73	0.77
Range	31.1— 36.0	29.4— 35.1	37.9— 47.1	43.5— 54.2	34.8— 47.5	23.9— 30.0

List of specimens.—Rio de Janeiro (state): U.S.N.M. no. 97317, the type of *Hyla similis*, and paratypes U.S.N.M. nos. 97312–6, 97318–52,

97374–6, from Manguinhos, all collected between January 18 and May 20, 1935, mostly by J. Venancio; U.S.N.M. nos. 96144–6 from Manguinhos collected in January 1922; U.S.N.M. no. 96203, an adult male from Bom Sucesso near the city of Rio de Janeiro, collected on October 25, 1928, and received from Dr. A. Lutz; U.S.N.M. no. 96213 from Amorim near the city of Rio de Janeiro collected in January 1926; U.S.N.M. nos. 81119–21 from Rio de Janeiro, collected in 1930 and received from Dr. A. Lutz.

HELMINTHOLOGY.—*Hymenolepis johnsoni*, n. sp., a cestode from the vole *Microtus pennsylvanicus drummondii*. EVERETT L. SCHILLER, Arctic Health Research Center, Anchorage, Alaska. (Communicated by Harald A. Rehder.)

In connection with a separate work concerning morphological variation, the writer had occasion to study a number of hymenolepidid cestodes obtained from the autopsy of some preserved microtine rodents in the collection of the U. S. National Museum. Two of these cestodes, taken from a vole, *Microtus pennsylvanicus drummondii* (Audubon and Bachman), collected at Fort Rae, District of Mackenzie, Canada, represent a species of the genus *Hymenolepis* Weinland, 1858, which appears to be unknown in the parasitological literature and therefore is herein described as new.

The voles from which this material was taken were included among a large series of preserved rodents made available to Dr. Robert Rausch, of this laboratory, in conjunction with a survey of the helminth parasites of Nearctic microtine rodents. All hymenolepidid cestodes were turned over to the writer for study. This opportunity is taken to express to Dr. David H. Johnson, associate curator, division of mammals, U. S. National Museum, appreciation of his generous cooperation, which has made these studies possible.

***Hymenolepis johnsoni*, n. sp.**

Figs. 1–3

Diagnosis.—Length of strobila 30–40 mm; maximum width 1.4 mm, attained at posterior end. Scolex diameter 150–180 μ . Suckers, unarmed, 64 by 80 μ . Evaginated rostellum 160 μ long by 48 μ wide at apex, which supports single row of 10 hooks 15 μ in length. Strobila 108 μ wide immediately posterior to

base of scolex. Genital pores unilateral and dextral. Genital ducts pass dorsal to excretory canals. Cirrus sac muscular, averages 112 μ in length by 43 μ in diameter in mature proglottids. External seminal vesicle well developed, 115 by 72 μ . Cirrus armed with minute spines. Testes, three in number, ovoid, 24 by 32 μ , arranged in form of triangle with one testis poral and two aporal to ovary and vitelline gland. Deeply lobed ovary located in middle of proglottid. Vitelline gland lies ventral and posterior to ovary. Vagina ventral and posterior to cirrus sac. Saccate seminal receptacle prominent in mature proglottids, attains maximum size of 168 by 104 μ . Uterus extends as slender irregular tube transversely across anterior part of proglottid, passing dorsal to excretory canals and reaching beyond them. Completely developed eggs not observed. Ventral longitudinal excretory canals measure 93 μ in diameter; dorsal canals, 11 μ in diameter.

Host.—*Microtus pennsylvanicus drummondii* (Audubon and Bachman).

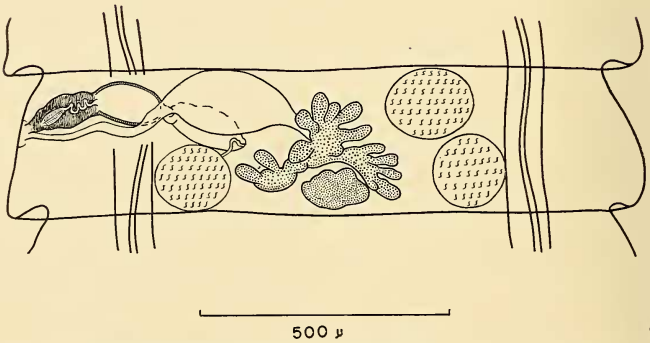
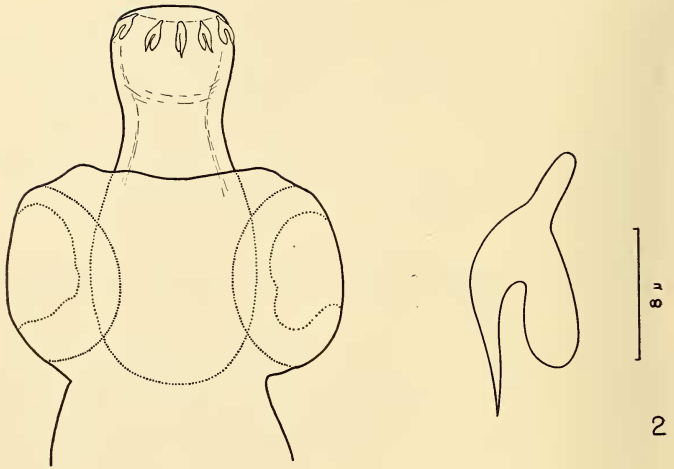
Locality.—Fort Rae, District of Mackenzie, Canada.

Habitat.—Small intestine.

Type.—One slide, no. 37340, containing an entire specimen, has been deposited in the Helminthological Collection of the U. S. National Museum.

DISCUSSION

Baer (1931) listed 14 armed species of *Hymenolepis* parasitic in rodents and added *H. muris-sylvatici* (Rudolphi, 1819) to this



FIGS. 1-3.—Morphological details of *Hymenolepis johnsoni*, n. sp.: 1, Scolex; 2, rostellar hook; 3, late mature proglottid (ventral view).

list. In a further review of the taxonomic status of this group (1932) he reduced the total number to 13. More recently Rider and Macy (1947) described *H. ondatrae* bringing the total again to 14. Of these, only four species have 10 rostellar hooks. These were found to differ from *H. johnsoni* as follows:

H. cvaginata Barker and Andrews, 1915 (from *Ondatra zibethica* L.), has a strobila of much greater length (200–400 mm), a bilobed ovary, and smaller rostellar hooks (7 μ) of a characteristically different shape.

H. pearsei Joyeux and Baer, 1930 (from *Hybomys univittatus* Peters), has a larger cirrus sac (520 by 60 μ), testes arranged in a straight line, the ovary and vitelline gland poral to midline, and much longer rostellar hooks (60 μ) of a different shape.

H. muris-sylvatici (Rudolphi, 1819) (from *Apodemus sylvaticus* (L.)) has an aspinose cirrus and larger rostellar hooks (23 μ), which differ markedly in shape.

H. ondatrae Rider and Macy, 1947 (from *Ondatra zibethica occipitalis* (Elliot)), has a larger cirrus sac (30–35 by 150–220 μ), an ovary that is smooth or may tend to be trilobate, and rostellar hooks that vary in number from 8 to 10, are of a much greater length (67–73 μ), and have a distinctly different shape.

This cestode is named in honor of Dr. David H. Johnson, whose interest in these studies made possible the examination of valuable host material.

REFERENCES

- BAER, J. G. *Sur la position systématique de Taenia muris-sylvatici Rudolphi, 1819.* Bull. Soc. Neuchâtel. Sci. Nat. **55**: 35–39. 1931.
- . *Contribution à la faune helminthologique de Suisse.* Rev. Suisse Zool. **39**: 1–57. 1932.
- RIDER, C. L., and MACY, R. W. *Preliminary survey of the helminth parasites of muskrats in northwestern Oregon, with description of Hy-menolepis ondatrae n. sp.* Trans. Amer. Micr. Soc. **66**: 176–181. 1947.

ZOOLOGY.—*Geographical distribution of the species of nemerteans of the Arctic Ocean near Point Barrow, Alaska.*¹ WESLEY R. COE, Scripps Institution of Oceanography. (Communicated by Fenner A. Chace, Jr.)

Nemerteans occur along the borders of all the oceans, from beneath the Polar Seas northwest of Greenland (Coe, 1944) to the ice barrier surrounding the South Pole (Coe, 1950). Moreover most of the same genera, but not the same species, are found in both these extremes of latitude.

The floor of the Arctic Ocean near Point Barrow is evidently well adapted for populations of nemerteans, for Prof. and Mrs. George MacGinitie during their two years at the Arctic Research Laboratory² collected more than 300 specimens of these worms. Nemerteans were found at nearly all the dredging stations, from shallow water to depths of about 250 meters 12 to 16 miles from shore. The collections contained 24 recognizable species, among which are 7 species of *Amphiporus*, 4 of *Tubulanus*, 3 of

Micrura, 4 of *Tetrastemma*, 2 of *Cerebratulus*, 1 each of *Lineus*, *Emplectonema*, *Nemertopsis*, and *Paranemertes*. As in other collections from Arctic seas, the genus *Amphiporus* has not only the greatest number of species but some of the species have also the largest populations. *A. angulatus* and *A. lactiflorus* are the most abundant species in the Point Barrow area. Ten of the species have not been reported previously from strictly Arctic seas, although three of these have been found in the nearby Bering Sea.

These collections are of particular interest because only three species of nemerteans were formerly known from that portion of the Arctic seas and the others contribute to an understanding of the circumpolar distribution of some of the species. Even at the present time no nemerteans are known from the Polar seas between the Point Barrow area and northwest Greenland on the east and Nova Zembya and Franz Josef Land on the west.

From the Polar seas the populations of

¹Contribution of the Scripps Institution of Oceanography, new series, no. 557.

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